

Appn. No. 10/789,572

Attorney Docket No. 10541-1929

### I. Amendments to the Specification

Please replace paragraph [0015] in the specification with the amended paragraph [0015] below to correct the informalities noted by the examiner.

[0015] The output of the prefilter 54 constitutes the desired yaw rate and desired lateral acceleration, which are calculated in such a way that considers the steering wheel angle, the steering ratio, the vehicle speed, as well as other vehicle parameters including the wheel base and understeer coefficient. One embodiment of the mathematical relationship of the desired yaw rate and desired lateral acceleration as calculated in the prefilter 54 is provided in Equation 1 and Equation 2.

$$r_{des} = \frac{VhSpd * Steeringratio * SWA}{L + K * VhSpd^2} \quad (1)$$

where,

$r_{des}$ : desired yaw rate

L: wheelbase of the vehicle

K: understeer coefficient

VhSpd: vehicle speed

SWA: steering wheel angle

Steeringratio: steering ratio

$$Lat_{des} = \frac{VhSpd^2 * Steeringratio * SWA}{L + K * VhSpd^2} \quad (2)$$

$$Lat_{des} = \frac{VhSpd^2 * Steeringratio * SWA}{L + K * VhSpd^2} \quad (2)$$



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where,

$\text{Lat}_{\text{des}}$ : desired lateral acceleration

L: wheelbase of the vehicle

K: understeer coefficient

VhSpd: steering wheel angle vehicle speed

SWA: steering wheel angle

Steeringratio: steering ratio



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